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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,320	03/28/2002	Hiroshi Nojima	01241.000022	2447

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EXAMINER	
LU, FRANK WEI MIN	
ART UNIT	**PAPER NUMBER**
1634	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/089,320	NOJIMA ET AL.	
	Examiner	Art Unit	
	Frank W. Lu	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/28/2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-77* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-4, 11-15, 30, 31, 37-39, 43, 60, 74, and 75, drawn to a DNA (claims 1, 4, 15, and 37,), a shear-stress-response DNA (claims 2 and 3), a recombinant virus vector (claims 30, 31, 43, and 60), a recombinant DNA (claim 38), a transformant (claim 39), and an agent for suppressing or promoting the apoptosis of cells (claims 74 and 75).

Group II, claims 5 and 20, drawn to a method for detecting an mRNA for a shear stress-responsive gene.

Group III, claims 6, 7, 16, 17, and 23, drawn to a diagnostic method for vascular disease caused by arteriosclerosis (claims 6, 16, and 23) and a method for detecting a gene causative of arteriosclerosis (claims 7 and 17).

Group IV, claims 8, 9, 18, 19, 25, and 26, drawn to a method for screening an agent for regulating the transcription or translation of a shear stress-responsive gene using a DNA (claims 8, 18, and 25) and a method for screening a therapeutic agent for vascular diseases caused by arteriosclerosis using a DNA (claims 9, 19, and 26).

Group V, claims 10, 28, 32, 44, and 61, drawn to a method for treating vascular diseases caused by arteriosclerosis using a DNA.

Group VI, claims 21, 24, 69, and 76, drawn to a method for identifying the apoptosis sensitivity of cells using a DNA.

Group VII, claims 22, 29, 33, 59, 62, 63, 69, and 76, drawn to a method for suppressing or promoting the apoptosis of cells using a DNA.

Group VIII, claims 27, 34, and 69, drawn to a method for screening an agent for suppressing or promoting the apoptosis of cells using a DNA.

Group IX, claims 35, 36, 74, and 75, drawn to a protein (claims 35 and 36) and an agent for suppressing or promoting the apoptosis of cells (claims 74 and 75).

Group X, claim 40, drawn to a process for the preparation of a protein.

Group XI, claims 41, 42, 47, 48, 53, 54, 58, 64, 65, 67, and 69, drawn to a method for screening a therapeutic agent for vascular diseases caused by arteriosclerosis using the resulting culture or a protein or an antibody (claims 41, 42, 47, and 53) and a method for screening an agent for regulating the transcription or translation of a shear stress-responsive gene using the antibody (claims 48, 55, and 65), a method for screening an agent using a protein (claims 58, 67, and 69).

Group XII, claims 45, 52, 74, and 75, drawn to an antibody (claims 45 and 52) and an agent for suppressing or promoting the apoptosis of cells (claims 74 and 75).

Group XIII, claims 46, 49, 55, and 70, drawn to a method for detecting a protein using an antibody (claim 46) and a diagnostic method for vascular diseases caused by arteriosclerosis using an antibody (claims 49, 55, and 70).

Group XIV, claim 50, 56, and 72, drawn to a method for treating vascular diseases caused by arteriosclerosis using an antibody.

Group XV, claims 51, 57 and 77, drawn to a drug delivery method.

Group XVI, claims 66 and 73, drawn to a method for regulating the apoptosis of cells using an antibody.

Group XVII, claims 68 and 71, drawn to a method for identifying the apoptosis sensitivity of cells using an antibody.

2. The inventions listed as Groups I to XVII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I and Groups II to XVII do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features since a DNA recited in claim 1 is known in the art. For example, a poly (T) in Table 1 of US Patent NO. 5,596,091 is a DNA recited in claim 1 (SEQ ID NO: 145 has a poly(T) sequence).

Group II and Groups III to VIII do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features. For example, mRNA of Group II is not required for Groups III to VIII, a diagnostic method of Group III is not required for Groups II and IV to VIII, a screening method of Group IV is not required for Groups II, III, and V to VIII, treating vascular diseases caused by arteriosclerosis of Group V is not required for Groups II to IV and VI to VIII, apoptosis sensitivity of cells of Group VI is not required for Groups II to V, VII and VIII, suppressing or promoting the apoptosis of Group VII is not required for Groups II to VI and VIII, screening an agent for suppressing or promoting the apoptosis of cells of Group VIII is not required for Groups II to VII.

Groups II to VIII and Groups IX to XVII do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features. For example, DNA of Groups II to VIII is not required for Groups IX to XVII while protein and antibody of Group IX to XVII is not required for Groups II to VIII.

Groups IX and XII do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features. For example, protein of Group IX is not required for Group XII while antibody of Group XII is not required for Group IX.

Group X and Groups XI and XIII to XVII do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features. For example, the preparation of protein in Group X is not required for Groups XI and XIII to XVII, a screening method of Group XI is not required for Groups X and XIII to XVII, a diagnostic method of Group XIII is not required for Groups X, XI, and XIV to XVII, treating vascular diseases caused by arteriosclerosis of Group XIV is not required for Groups X, XI, XIII, and XV to XVII, drug delivery of Group XV is not required for Groups X, XI, XIII, XIV, XVI and XVII, regulating the apoptosis of cells of Group XVI is not required for Groups X, XI, XIII to XV and XVII, and apoptosis sensitivity of cells of Group XVII is not required for Groups X, XI, and XIII to XVI.

3. Sequence Election Requirement Applicable to All Groups

Each Group detailed above reads on patentably distinct SEQ ID Numbers. Each sequence is patentably distinct because the sequences are structurally unrelated sequences, and a further restriction is applied to each Group. Each sequence is patentably distinct because the sequences

are structurally unrelated sequences, and a further restriction is applied to each Group. Therefore, applicant must further elect a single SEQ ID NO and applicant is advised that examination will be restricted to only elected SEQ ID NO.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571)273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (571)272-0745.

Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

Frank Lu
PSA
March 15, 2005

FRANK LU
PATENT EXAMINER